DOUGLAS McKENNA AND PARTNERS PTY. LTD.

REPORT ON

GLADSTONE ALLUVIAL TIN PROSPECT

TASMANIA

FOR

GEOSEARCH PTY. LTD.

May 4, 1972

SUMMARY

At the request of Geosearch and Mr. Neil Thomas, an exploration programme has been recommended to test an alluvial tin prospect at Gladstone, Tasmania. An option is held over the Dorset Dredge some 2 miles away, and it is intended to use this dredge on the ground to be tested.

The programme recommended in this report covers drill indicating about 3 million yards of material (about 2 years operation) and finding a route for the dredge to be moved from its present position. Two-thirds of the budget of $30,000 will be spent on the proving-up drilling, and one third on the transferal of the dredge.

From the results of previous exploration work, the target appears to be within the bounds of this programme.

CONTENTS

Accompanying Plans

Plan showing initial drill hole locations Scale 1 inch to 10 chains

INTRODUCTION :

It has been requested by Geosearch Pty. Ltd. and Mr. Neil Thomas that an exploration programme be drawn up to test the Gladstone Alluvial Tin Prospect (Tasmania) to a limited extent with a budget of $30,000.

A syndicate of various people and companies are taking out an option on Portland Holdings Pty. Ltd's mineral leases and the leases and Dorset Dredge owned by the Aberfoyle Group. The intention is to purchase the dredge to work the areas held by Portland Holdings.

With these factors in mind, this report recommends that the funds for exploration be spent in two directions :

1. Drill indicating about 2 years reserves for the dredge to excavate profitably ($\frac{2}{3}$rds of budget) and

2. Locating the best means of moving the dredge from its present position to the drill indicated reserves ($\frac{1}{3}$ of budget).

The writer has once been on site some 2 years ago and has a limited knowledge of the area.

GEOLOGY :

The geology and economic geology of the district have been fully reported by Mr. P. B. Nye in private and government reports, and it is not necessary to be further commented on in this report.

From Mr. Nye's work the area of most interest as a dredging proposition is around the Beltz, McGregor and Higg's workings. Exploration work in the form of shallow drilling and back-hoe trenches has been carried out in the past to test the shallow drifts of the Great Northern Plains. These are the alluvials which have been mined in these old workings. Most of these workings have apparently bottomed on sand rather than bedrock, and very little work has been done to explore the deep leads in this area. Two of the old Government line 6 of bores (now within the McGregor workings) hit bedrock at 58 ft and 42½ ft. Carey's holes to the north of the Government line hit bedrock at 24, 25, 25, 26, 25 and 47 ft and reputedly averaged 0.5 lbs/ cu yd. Minefields Exploration's holes to the west of the Government line appear to have hit clay bottom at 23½, 25, 27 and 23 ft.

The tentative reserves that Mr. Nye has calculated are based mostly on the shallow back-hoe trenches to a depth of about 10 ft. It can be seen that a much greater depth of alluvials is present in this area from the information of the drilling that has been performed in the past. It can also be seen that the depths obtained are quite suitable for the dredge to operate in.

As far as the grades are concerned, in Mr. Nye's reserves the values are well above the dredge operating cut-off of around 0.2 lbs/ cu yd and supply a worthy exploration target.

RECOMMENDATION :

It is recommended that about 3 million cubic yards of material be proved up (i.e. about 2 years operation) and that a route for the transferal of the Dorset Dredge from its present location to the proved up reserves be found.

This programme should be carried out in the field in three stages :

1. A fairly wide spread grid be drilled in the Higgs, McGregor, Beltz and Taylors areas.

2. A closer spaced grid be drilled on the most favourable areas and

3. A route for the moving of the dredge be drilled, by preference through tin-bearing ground.

Stage 1 can be commenced as soon as a go-ahead is given and contracts for drilling etc are let. Assuming that results are successful, then this stage can continue into Stage 2.

Stage 3 can be carried out at the same time as Stage 2 if a second drill rig is brought into operation. For the purposes of this report, Stage 3 has been assumed to follow Stage 2 partly because it will be necessary to know the destination of the dredge to proven reserves, however costs should be reduced if a second rig is brought in whilst Stage 2 is in operation.

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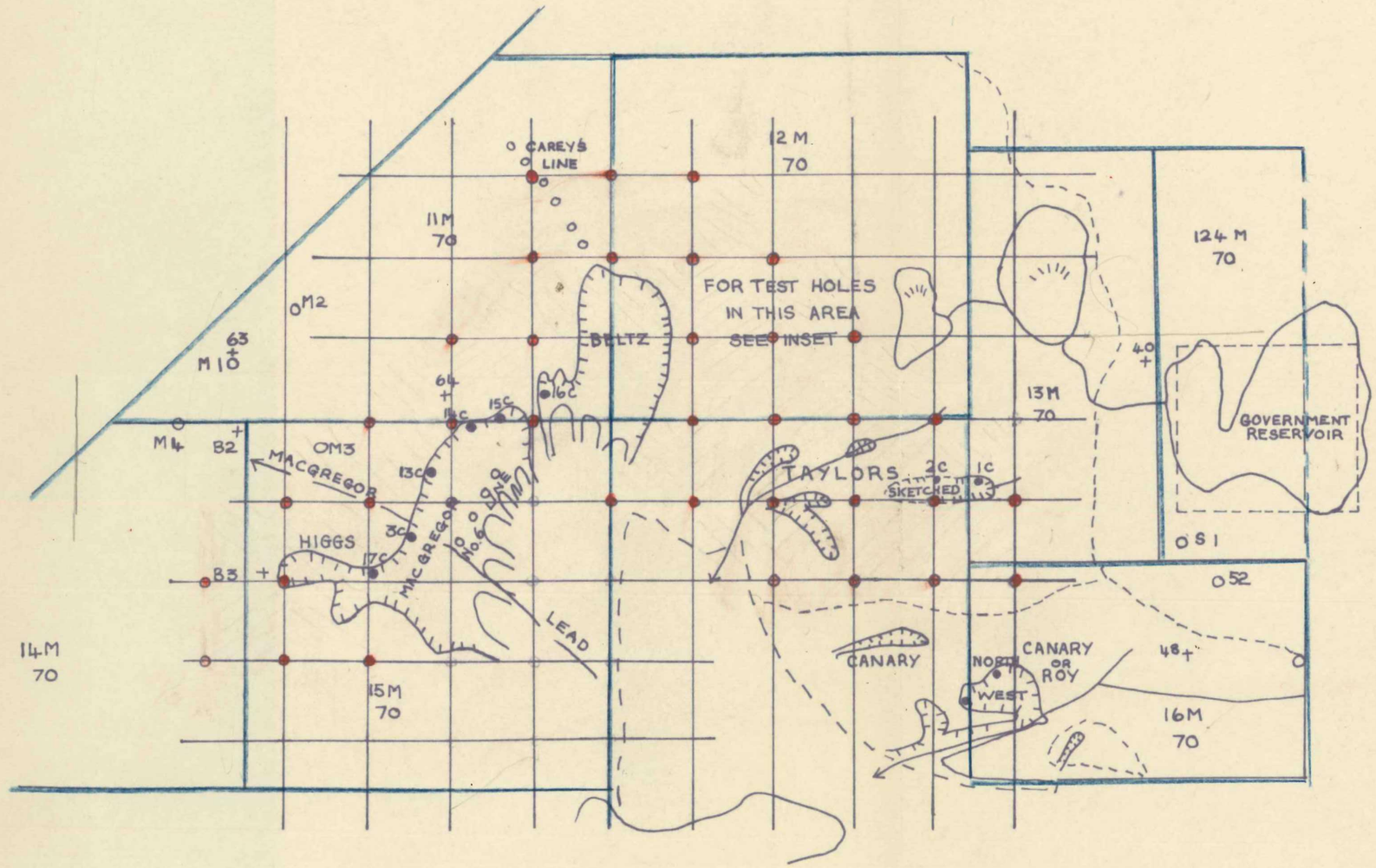
GLADSTONE PROJECT
TASMANIA

COPIED FROM PLAN BY P.B.NYE



LEASE BOUNDARIES

PLAN SHOWING PROPOSED STAGE 1 DRILL HOLES

SCALE 1 INCH TO 10 CHAINS

Douglas McKerron & Ptnrs P/L 6/5/1973

A more detailed summary of the recommended programme is as follows :

Stage 1

1. A grid on 400 ft centres with pegs at 100 ft intervals on cross lines be surveyed in with elevations. About 20,000 ft of surveying is envisaged.

2. Thirty six holes be drilled on a 400 ft by 400 ft grid system as outlined on the accompanying plan. The location of these holes is flexible, and can be altered after site inspection. The holes are to be drilled to bedrock or to a maximum of about 60 ft. (The dredge operates to 50 ft below water level).

3. A geologist be on site to supervise sampling, log the bore-holes and geologically map the gridded area, especially picking up bedrock outcrops.

4. Samples taken in 5 ft intervals (as far as possible) to be analysed for tin.

Stage 2

5. Assuming results obtained are successful, fill-in drilling of the most promising areas be carried out. A further thirty six holes will be necessary to drill on 400 ft by 100 ft centres to drill indicate 3 million cubic yards of material. The depths of the holes will depend on the Stage 1 results.

6. A geologist to continue on site as before.

7. Samples to be analysed as before.

Stage 3

8. A surveyor to lay in short cross lines along the proposed route for the dredge to be moved. Elevations to be picked up along the route.

9. Holes, 50 ft apart, be drilled on the surveyed lines. The number and depth of holes is uncertain at this stage.

10. A geologist to recommend the route, supervise drilling and sampling, and geologically map the route especially picking up bedrock outcrops.

11. Samples, where necessary, to be analysed for tin.

Stage 4

12. A full report giving ore reserves and recommendations for transferal of the dredge be compiled.

BUDGET :

It is estimated that the budget of $30,000 be allocated as follows :

STAGE 1

		$	$
1.	Surveying		
	Surveyor 6 days at $60	360	
	Labour 12 days at $15	180	
	Travel and Vehicles	160	
	Accommodation and Expenses	90	
	Instrument Hire, survey pegs etc.	60	
			$ 850
2.	Drilling		
	27 days at $14 per hour (approx. 1080 ft)	3780	
	Travelling and other expenses	540	
			$ 4320
3.	Geological Services		
	Supervising Geologist 3 days at $110	330	
	Field Geologist 27 days at $65	1755	
	Labour 27 days at $15	405	
	Travel and Vehicles	620	
	Accommodation and Expenses	435	
			$ 3545
4.	Analysis		
	216 Samples at $1.50	324	
	Sample bags and Freight	50	
			$ 374
	Stage 1 Total		$ 9089

STAGE 2

5.	Drilling		
	27 days at $14 per hour (approx.1080 ft)	3780	
	Travelling and other expenses	540	
			$ 4320
6.	Geological Services		
	Supervising Geologist 3 days at $110	330	
	Field Geologist 27 days at $65	1755	
	Labour 27 days at $15	405	
	Travel and Vehicles	620	
	Accommodation and Expenses	435	
			$ 3545
7.	Analysis		
	216 Samples at $1.50	324	
	Sample bags and Freight	50	
			$ 374
	Stage 2 Total		$ 8239

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STAGE 3

		$	
8,	**Surveying**		
	Surveyor 6 days at $60	360	
	Labour 12 days at $15	180	
	Travel and Vehicles	160	
	Accommodation and Expenses	90	
	Instrument Hire, survey pegs etc.	60	
			$ 850
9.	**Drilling**		
	25 days at $14 per hour (approx.1000ft)	3500	
	Travel and other expenses	500	
			$ 4000
10.	**Geological Services**		
	Supervising Geologist 4 days at $110	440	
	Field Geologist 25 days at $65	1625	
	Labour 25 days at $15	375	
	Travel and Vehicles	540	
	Accommodation and Expenses	435	
			$ 3415
11.	**Analysis**		
	200 Samples at $1.50	300	
	Sample bags and Freight	50	
			$ 350
	Stage 3 Total		$ 8615

STAGE 4

12.	**Report Writing**		
	Supervising Geologist 4 days at $110	440	
	Field Geologist 6 days at $65	390	
	Drafting, printing etc	500	
			$ 1330
	Stage 4 Total		$ 1330
	TOTAL ALL STAGES		$ 27273
	Add contingencies 10%		2727
	BUDGET TOTAL		$30,000

COMMENTS :

The economics of the project have been covered by Mr. D. C. Pursell's report, and are thought to be sound. It would be of great advantage to work ground of the order of 0.4 lb/cu yd in the early years of operation in order that the capital raised for the venture may be paid off.

The area selected for initial exploration work was chosen on the basis of known values of 0.4 to 0.5 lb/cu yd, and the knowledge that the ground is deep enough to be worked by the dredge. In this stage of exploration the definition of the deep leads is not being attempted since this would cost considerably more to explore. The dredge will operate to 50 ft below water level, and the economics of searching to a greater depth should be assessed before deeper testing is tried.

There are, of course many acres of prospective tin-bearing ground in the area held by Portland Holdings and to the north-west at Posters Marsh. It is not known how much of this ground is suitable for dredging, but assuming that the grade is good enough, then many years of reserves should be available.

The density of the drilling pattern of the drill indicated reserves will be 400 ft by 100 ft. This should not be considered a final proven reserve (At the Dorset Dredge, they drill ahead of the dredge on a 200 ft by 50 ft pattern), but is sufficient to show, with the money available, whether 3 million yards of material are present. The average depth of this yardage (above 50 ft below surface) does not affect the total footage drilled to a great extent since more holes can be drilled to a shallower depth to achieve the same result. For the purpose of this report, an average depth of 30 ft per hole has been estimated. This requires a surface area of 2.7 million sq ft, and the 36 fill-in prove-up holes should be located between 20 stage 1 exploration holes. Therefor we have 16 of the 36 holes in the Stage 1 programme which need not necessarily contain ore grade material.

It will take about 1 month to complete each stage of the programme. Obviously the quicker the programme is carried out, the cheaper the overall cost will be. In this respect the Stage 3 part can be run at the same time as the Stage 2 since it is hoped that the first destination of the dredge will be indicated by the scout drilling. The route for the dredge to take is uncertain at present and will require site inspection and information that can be obtained locally at Gladstone.

The figures used in the budget are estimates, but should give a fairly accurate guide to the costs of the programme. Transport in the Northern Plains is treacherous, especially in wet weather, and some delays may be expected here.

The main item of the budget is the drilling. The costs quoted are based on using Mr. Walter Manson's Goldfields G33 rig. He offers a time basis at $14 per hour, and it is estimated that all-up the cost should be slightly less than $4.00 per ft. W. L. Sides have quoted an estimate of $5.00 per ft. using a G44 rig that they have in the area.

Overall, the project is thought to be worthy of spending the $30,000 risk money especially since it is very rare that a dredge can be obtained close to known alluvial ground.

Douglas McKenna + Partners

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